

REMARKS

Claims 83, 84, and 87 were copied from Claims 1, 25, and 30, respectively, of the '489 Patent. Claim 86 was substantially copied from Claim 29 of the '489 Patent. Accordingly, Applicants respectfully submit that an interference should be declared because the present Application and the '489 Patent claim the same invention. Applicants' compliance with 37 C.F.R. § 41.202 is indicated below.

I. 37 C.F.R. § 41.202(a) (1)

Applicants respectfully request that the Examiner declare an interference between the present Application and U.S. Patent No. 6,976,489.

II. 37 C.F.R. § 41.202(a)(2)

Applicants propose the following counts:

I. A gas humidification apparatus comprising:

an inlet;

a humidification device in fluid communication with said inlet, said humidification device comprising:

a heater housing comprising a heater and a plurality of openings;

a humidification material that surrounds said heater, readily absorbs moisture and readily releases moisture when exposed to a dry environment, wherein said humidification device further comprises a second humidification material that is spaced from said humidification material and readily absorbs moisture and readily releases moisture when exposed to a dry environment; and

an outlet in fluid communication with said humidification device.

II. A gas apparatus comprising:

an inlet;

a heater in fluid communication with said inlet,

a temperature sensor for measuring a temperature of a gas that flows within said gas apparatus in an indirect manner; and

a humidification material that readily absorbs moisture and readily releases moisture when exposed to a dry environment, wherein said humidification material has a configuration that generates turbulence for a gas that should pass over a surface of said humidification material.

III. A gas humidification apparatus comprising:

an inlet means for supplying a gas;

turbulence means for generating turbulence in said gas;

outlet means for expelling said turbulent gas from said humidification apparatus; and

a humidification material that is a unitary structure and readily absorbs moisture and readily releases moisture when exposed to a dry environment and is the sole humidification material of said gas humidification apparatus.

IV. A gas apparatus comprising:

an inlet;

a heater in fluid communication with said inlet;

a temperature sensor for measuring a temperature of a non-ambient gas that flows within said gas apparatus in an indirect manner;

a humidification material that readily absorbs moisture and readily releases moisture when exposed to a dry environment, wherein said humidification

material is a unitary structure and is the sole humidification material of said gas apparatus;

a second inlet that transfers a fluid to said humidification material; and

wherein said inlet transfers said gas to said humidification material.

III. 37 C.F.R. § 41.202(a)(3)

Claim 83 of the present Application and Claim 1 of the '489 Patent correspond to Count I and interfere under 37 C.F.R. § 41.202(a) (3). Claim 83 of the present Application anticipates the subject matter of Claim 1 of the '489 Patent. This is the case because, as shown below, Claim 83 of the present Application and Claim 1 of the '489 Patent are substantially identical.

The Present Application

83. A gas humidification apparatus comprising:

an inlet;

a humidification device in fluid communication with said inlet, said humidification device comprising:

The '489 Patent

1. A gas humidification apparatus comprising:

an inlet;

a humidification device in fluid communication with said inlet, said humidification device comprising:

The Present Application

a heater housing comprising a heater and a plurality of openings;

a humidification material that surrounds said heater, readily absorbs moisture and readily releases moisture when exposed to a dry environment, wherein said humidification device further comprises a second humidification material that is spaced from said humidification material and readily absorbs moisture and readily releases moisture when exposed to a dry environment; and

an outlet in fluid communication with said humidification device.

The '489 Patent

a heater housing comprising a heater and a plurality of openings;

a first humidification material that surrounds said heater, readily absorbs moisture and readily releases moisture when exposed to a dry environment, wherein said first humidification device further comprises a second humidification material that is spaced from said humidification material and readily absorbs moisture and readily releases moisture when exposed to a dry environment; and

an outlet in fluid communication with said humidification device.

Claim 84 of the present Application and Claim 25 of the '489 Patent correspond to Count II and interfere under 37 C.F.R. § 41.202(a)(3). Claim 84 of the present Application anticipates the subject matter of Claim 25 of the '489 Patent. This is the case because, as shown below, Claim 84 of the present Application and Claim 25 of the '489 Patent are substantially identical.

The Present Application

84. A gas apparatus comprising:

an inlet;

The '489 Patent

25. A gas apparatus comprising:

an inlet;

The Present Application

a heater in fluid communication with said inlet,

a temperature sensor for measuring a temperature of a gas that flows within said gas apparatus in an indirect manner; and

a humidification material that readily absorbs moisture and readily releases moisture when exposed to a dry environment, wherein said humidification material has a configuration that generates turbulence for a gas that should pass over a surface of said humidification material.

The '489 Patent

a heater in fluid communication with said inlet,

temperature sensor for measuring a temperature of a gas that flows within said gas apparatus in an indirect manner; and

a humidification material that readily absorbs moisture and readily releases moisture when exposed to a dry environment, wherein said humidification material has a configuration that generates turbulence in said gas as it passes over a surface of said humidification material.

Claim 86 of the present Application and Claim 29 of the '489 Patent correspond to Count III and interfere under 37 C.F.R. § 41.202(a)(3). Claim 86 of the present Application anticipates the subject matter of Claim 29 of the '489 Patent. This is the case because, as shown below, Claim 86 of the present Application and Claim 29 of the '489 Patent are substantially identical.

The Present Application

86. A gas humidification apparatus comprising:

an inlet means for supplying a gas;

The '489 Patent

29. A gas humidification apparatus comprising:

inlet means for heating and supplying a gas;

The Present Application

turbulence means for generating turbulence in said gas;

outlet means for expelling said turbulent gas from said humidification apparatus; and

a humidification material that is a unitary structure and readily absorbs moisture and readily releases moisture when exposed to a dry environment and is the sole humidification material of said gas humidification apparatus.

The '489 Patent

turbulence means for generating turbulence in said gas; and

outlet means for expelling said turbulent gas from said gas humidification apparatus,

wherein said humidification material is a unitary structure and is the sole humidification material of said gas humidification apparatus.

Claim 87 of the present Application and Claim 30 of the '489 Patent correspond to Count IV and interfere under 37 C.F.R. § 41.202(a)(3). Claim 87 of the present Application anticipates the subject matter of Claim 30 of the '489 Patent. This is the case because, as shown below, Claim 87 of the present Application and Claim 30 of the '489 Patent are identical.

The Present Application

87. A gas apparatus comprising:

an inlet;

a heater in fluid communication with said inlet;

The '489 Patent

30. A gas apparatus comprising:

an inlet;

a heater in fluid communication with said inlet,

The Present Application

The '489 Patent

a temperature sensor for measuring a temperature of a non-ambient gas that flows within said gas apparatus in an indirect manner;

a temperature sensor for measuring a temperature of a no ambient gas that flows within said gas apparatus in an indirect manner;

a humidification material that readily absorbs moisture and readily releases moisture when exposed to a dry environment, wherein said humidification material is a unitary structure and is the sole humidification material of said gas apparatus;

a humidification material that readily absorbs moisture and readily releases moisture when exposed to a dry environment, wherein said humidification material is a unitary structure and is the sole humidification material of said gas apparatus;

a second inlet that transfers a fluid to said humidification material; and

a second inlet that transfers a fluid to said humidification material; and

wherein said inlet transfers said gas to said humidification material.

wherein said inlet transfers said gas to said humidification material.

IV. 37 C.F.R. § 41.202(a)(4)

The present Application claims the benefit of a filing date of May 18, 1999. The '489 Patent claims the benefit of a filing date of June 29, 2001. Since the present Application claims the benefit of an earlier filing date than the '489 Patent, Applicants should be the senior party in the interference.

V. 37 C.F.R. § 41.202(a)(5)

Applicants respectfully contend that Claims 82-87 of the present Application are fully supported by the specification of the present Application, as originally filed. Specific support for the newly presented claims can be found in the Amendment to the present Application filed on February 9, 2005, pages 5-8, reproduced below.

Specific support for the newly presented claims can be found in applicants' specification as follows. Applicants will make reference to various portions of the specification and drawings as examples of where support for the claims is provided. Applicants wish to note that other portions of the specification may also provide support for the claims.

All of the claims recite some type of inlet or inlet means for supplying a gas. The embodiments in the specification have an inlet 124 (page 7, line 27). All of the claims recite some type of humidification device having various characteristics. Applicants' specification recites various options for humidification, at least one of which discloses the various characteristics recited in the new claims:

The humidification material or device is in fluid communication with the inlet. For example, pads 130, 131, and 132 are in fluid communication with inlet 124.

The humidification material readily absorbs moisture and readily releases moisture when exposed to a dry environment. The humidification material is "comprised of one or more layers of liquid-retaining or absorbing padding or sponge material . . ."

(Page 8, lines 3-8). One example is a rayon/polyester formed fabric (page 8, lines 8-11).

The humidification material is placed within a shell that is not made of a material that readily absorbs moisture and readily releases moisture when exposed to a dry environment. Housing 122 defines a chamber for heating and humidifying gas (page 7, lines 27-30 and page 8, lines 1-2). If the material were not as described, the device would not function properly.

The humidification material may surround the heater (page 8, lines 24-26).

There can be a second humidification material spaced from the humidification material. See Figure 2, where humidification material 132 is spaced from humidification material 130/131.

The humidification material has a configuration that generates turbulence for a gas that should pass over a surface of said humidification material. The claim is not limited to any particular surface and turbulence occurs in the inner surfaces of humidification materials 130 and 131, for example. However, turbulence is also caused by the gas exiting and passing over the surface of humidification material 130 (which can be porous) at numerous different angles and then having to pass over the surface (which can be porous) of humidification material 131 to enter that material at numerous different angles. Turbulence will also be caused as gas enters the chamber and has to change direction rapidly to enter various pores of humidification material 130.

The humidification material can be unbundled to any other humidification material (e.g. material 132 in Figure 2). Also, the humidification means may be “one or more layers.” (Page 8, lines 4-6). For the same reasons, the humidification material can also be the sole humidification material of the gas humidification apparatus.

Several claims recite a temperature sensor for measuring a temperature of a gas (which may be non-ambient) that flows within said gas apparatus in an indirect manner. Temperature sensor 136 (as illustrated in Figure 2) may indirectly measure the temperature of the gas exiting through outlet 126. As the gas passes over sensor 136 before flowing through humidification material 132, the temperature of the outlet gas is indirectly sensed as the humidification provided by material 132 will cool the gas.

One claim recites “a heater housing comprising a heater and a plurality of openings.” Another claim recites a heater that generates heat via electricity, wherein said humidification device envelops said heater. One definition of housing is “something that covers protects or supports.” (American Heritage Dictionary, 2nd College Edition, 1991) In the embodiment illustrated in Figure 2, the humidification material 130 and 131 covers heater 134, thereby forming a housing (page 8, lines 24-26). The housing has a plurality of openings as humidification material 130 and 131 can be porous (page 8, lines 8-14). This humidification material, as illustrated in Figure 2 also envelops the heater (page 8, lines 20-26). The heater is also in fluid communication with the inlet: “The heating element 134 heats the insufflation gas supplied through the inlet.” (Page 8, lines 26-29).

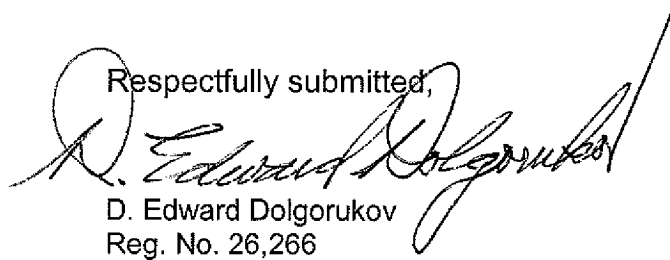
Some of the claims recite a shell with a configuration that generates turbulence in a gas or a turbulence means for generating turbulence. As noted above, the disclosed humidification material generates turbulence. In addition, however, in one embodiment (Figure 4), fluted surfaces 123 are provided to facilitate complete dispersion of the gas (page 13, lines 26-30). These surfaces cause dispersion by generating turbulence in the gas.

Some of the claims recite an outlet in fluid communication with the humidification device. Outlet 126 is in fluid communication with the humidification device (e.g. pads 130, 131 and/or 132). See Fig. 2, Fig. 4 and page 7, lines 24-30 through page 8, lines 1-2.

One claim recites a second inlet that transfers a fluid to the humidification material. Charging port 190 provides such a material. Thus new claims 82-87 are fully supported by the specification of the present application, and an interference with application serial number 09/896, 821 should be declared.

CONCLUSION

Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicants respectfully request full allowance of all pending claims. Furthermore, Applicants respectfully requests that the Examiner declare an Interference between the present Application and U.S. Patent No. 6,976,489.

Respectfully submitted,

D. Edward Dolgorukov
Reg. No. 26,266

Attorneys:
Marshall & Melhorn, LLC
Four SeaGate, 8th Floor
Toledo, OH 43604
(419) 249-7146
(419) 249-7151 FAX
dolgorukov@marshall-melhorn.com